

IN THE DRAWINGS

The attached sheet of drawing includes changes to Figure 1. This sheet, which includes Figure 1, replaces the original sheet including Figure 1.

Attachment: Replacement Sheet (1)

REMARKS/ARGUMENTS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1, 4-8 and 11-15 are presently active in this case. The present Amendment amends Claims 1, 7-8, and 11-13; and adds new Claims 14-15 without introducing any new matter; and cancels Claims 2-3 and 9-10 without prejudice or disclaimer.

The outstanding Office Action objected to Figure 1 as not being labeled as background art, and objected to the title of the invention as not being descriptive. Claims 8-9 and 12 were rejected under 35 U.S.C. § 102(b) as anticipated by Arai et al. (U.S. Patent No. 5,457,473, hereinafter "Arai"). Claims 1-2, 4-7, 10 and 13 were rejected under 35 U.S.C. § 103(a) as unpatentable over Arai. Claims 3 and 11 were rejected under 35 U.S.C. § 103(a) as unpatentable over Arai in view of Maki et al. (Japanese Patent Application No. JP 2000-250526, hereinafter "Maki").

In response to the objection to the drawings, submitted herewith is a Letter Submitting Drawing Sheets along with 1 Replacement Sheet for Figure 1, adding the label "Background Art." No new matter has been added.

In response to the objection to the title of the invention, the title is herewith amended to recite "Image Processing Device and Method, Display Device and Method, and Electronic Device Where Control Data for a Display is Superposed on an Image Signal." These features are supported by the features of Applicants' Claim 1, and no new matter has been added.

Moreover, independent Claim 1 is amended to recite features of dependent Claims 2-3, and to recite that "the control data being composed of a plurality of data elements, each data element being composed of a data byte that is repeated multiple times with each clock signal of the image processing apparatus to generate a repetitive data element series for each data element." These features find non-limiting support in Applicants' disclosure as

originally filed, for example in Figures 4-5 and 7, and in the specification at p. 20, paragraphs [0063]-[0064]. No new matter has been added.

In addition, the remaining independent Claims 7-8 and 12-13 have been amended to recite an analogous feature in the context of the respective claim language, with Claim 7 directed to an image processing method, Claim 8 directed to a display apparatus, Claim 12 directed to a display method, and Claim 13 directed to an electronic apparatus. Dependent Claims 2-3 and 9-10 are cancelled without prejudice or disclaimer, for having features that are already recited in the respective amended independent claims, and dependent Claim 11 is amended to change the claim dependency, and to delete features already recited in independent Claim 8. No new matter has been added by these amendments.

Furthermore, new Claims 14-15 are added. New Claims 14-15 depend from independent Claims 8 and 12, respectively, and recite features directed to the extracting of the control data by using a latch pulse. These features find non-limiting support in Applicants' disclosure as originally filed, for example in Figure 7, L₁ and L₂, and in the specification in paragraphs [0072]-[0074]. No new matter has been added.

In response to the rejection of Claims 1-13 under 35 U.S.C. §§ 102(b) and 103(a), in light of the amendments to the claims, Applicants respectfully request reconsideration of these rejections and traverse the rejections, as discussed next.

Briefly summarizing, Applicants' independent Claim 1 is directed to an image processing apparatus that executes predetermined signal processing on an input signal and outputs an image signal generated to driving unit of a display apparatus. The apparatus includes a superposing unit for superposing control data for controlling the driving unit on a vertical blanking data segment of the image signal, ***the control data being composed of a plurality of data elements, each data element being composed of a data byte that is repeated multiple times with each clock signal of the image processing apparatus to generate a***

repetitive data element series for each data element; and outputting unit for outputting the image signal with the control data superposed thereon to the driving unit, wherein the control data is provided for control parameters of the display apparatus that is to be controlled by the driving unit.

Turning now to the applied references, Arai is directed to an image display apparatus 1b capable of adjusting a display picture by an input unit. (Arai, Abstract, ll. 1-3, Fig. 1.) A control signal Sc with control data C_D to adjust the display picture is added to a video signal RGB or a synchronization signal Hs and Vs that is produced by a control signal addition circuit 16 located in a computer body 1a, and is sent to the display apparatus 1b. (Id., Abstract, ll. 3-10, Fig. 1, col. 4, ll. 57-65.) The display apparatus 1b includes a control signal separation circuit 18 that can extract the control data C_D from the control signal Sc. (Id. from col. 4, l. 66, to col. 5, l. 6, and col. 5, ll. 29-45.) However, Arai fails to teach all the elements of Applicants' independent Claim 1. In particular, Arai fails to teach:

the control data . . . composed of a plurality of data elements, each data element being *composed of a data byte that is repeated multiple times with each clock signal of the image processing apparatus* to generate a repetitive data element series for each data element.

(Claim 1, portions omitted, emphasis added.) Arai explains that the control data C_D is added to either the R, B, G, H_s or V_s signal, as control data between a start bit and a stop bit. (Arai, col. 6, ll. 9-13, Fig. 3) Moreover, Arai explains that the control data is generated in sync with the horizontal synchronizing signal Hs. (Arai, col. 5, ll. 60-67.) Accordingly, Arai fails to teach that the control data is composed of a plurality of data elements, each data element being composed of a data byte that is repeated multiple times with each clock signal of the image processing apparatus, as required by Applicants' independent Claim 1. Also, Arai is entirely silent on the repetition of data bytes.

The applied reference Maki, used by the pending Office Action to form a 35 U.S.C. § 103(a) rejection of some dependent claims, fails to remedy the deficiencies of Arai, even if we assume that the combination is proper. Maki is directed to a system that can transmit image data to a display device together with command data set that is sent multiple times to the display device, in case of a transmission error. (Maki, ¶ [0007].) Maki explains that the command data set is send twice in series to the display device. (Maki, ¶ [0017], Fig. 3.) However, in contrast, Applicants' independent Claim 1 requires that the control data is composed of a plurality of data elements, each data element being composed of a data byte that is repeated multiple times with each clock signal of the image processing apparatus, as required by Applicants' independent Claim 1. In Maki, only the entire data set is repeated, and not an individual data byte.

Therefore, even if the combination of Arai and Maki is assumed to be proper, the cited passages of the combination fails to teach every element of Applicants' Claim 1. Accordingly, Applicants respectfully traverse, and request reconsideration of this rejection based on these references.

Independent Claims 7-8 and 12-13 recite features that are analogous to the features recited in independent Claim 1. Moreover, Claims 7-8 and 12-13 have been amended in a manner analogous to the amendment to Claim 1. Accordingly, for the reasons stated above for the patentability of Claim 1, Applicants respectfully submit that the rejections of Claims 7-8 and 12-13, and the rejections of all associated dependent claims, are also believed to be overcome in view of the arguments regarding independent Claim 1.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 1, 4-8, and 11-15 is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicants' undersigned representative at the below listed telephone number.

Respectfully submitted,

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